

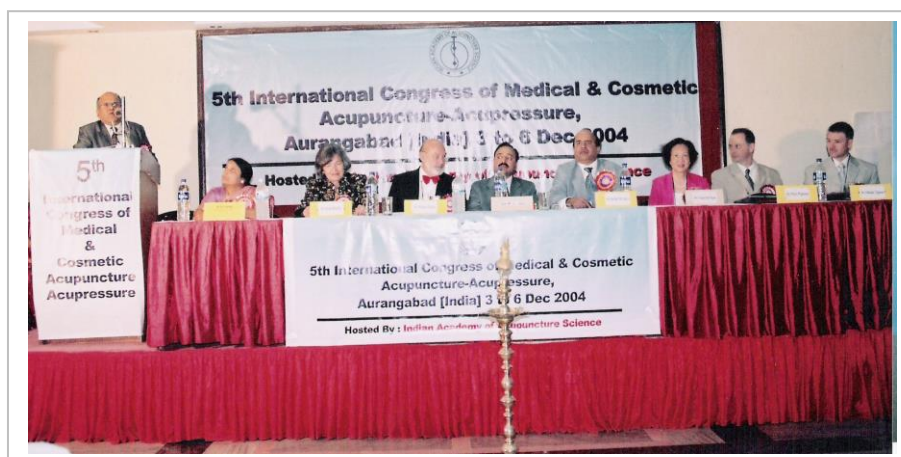
Visualization of Acupoints by Acuvision Device

Mikhail Teppone, Romen Avakyan,

The 5th International Congress of Medical & Cosmetic Acupuncture-Acupressure.

December 3-6, 2004, Aurangabad, India, p. 16-17

<https://archive.org/details/visualization-of-acupoints-by-acuvision-device>



The device “AcuVision” represents the high-voltage pulse generator with the microprocessor management, intended for visualization of points with the least electric resistance by means of their luminescence in high voltage corona discharge.

1. Acupoints, Channels and Organs

The skin of the human body is characterized by morphological and functional heterogeneity. The same heterogeneity can be found in the bodies of plants and insects [A.Zhirmunsky *et al.*, 1981; D.Madoli, 1984]. Several days after death electrical heterogeneity of the skin can be detected yet [A.Zhirmunsky *et al.*, 1981; T.Croley, 1986]. Because of autolytic process, which takes place in the cell after death, the physical parameters of the skin become equal gradually and electrical heterogeneity disappears. In terms of traditional Chinese medicine (TCM) the heterogeneity of skin is described as “Acupoints”, “Channels” and “Collaterals”.

In accordance with the TCM theory Qi (energy) and Blood circulates in the human body along the special pathways known as “Channels” and “Collaterals”. Yet no specific structures have been revealed to confirm “channel” up to now.

We can imagine “channels” to be a system of “gaps”, which are stretched out along surfaces of muscles, bones, tendons, vessels, etc. These “gaps” are filled by fibrous connective tissue, electrolytes and structured molecules of water.

It was revealed that informational interchange between cells was carried out by the electromagnetic fields, at the range of $10^{11} - 10^{14}$ Hz [V.Kaznacheev *et al.*, 1985; H.Frëlich, 1988]. Impulses of relatively low frequency can be conducted by the nervous system, but high frequency signals can be conducted by the waveguides, which could be “gaps” of the intercellular spaces. Theoretical and experimental studies have proved that “channels” can be dielectric wave-guides, which conduct electromagnetic waves of various frequency ranges [V.Kaznacheev *et al.*, 1985; E.Andreev *et al.*, 1985; T.Croley, 1986].

After discussion given above we can suppose that by the theory of “Channels & Collaterals” they described the physiology and pathology of the intercellular space. On the contrary by the theory of “Fu and Zang Organs” they described the physiology and pathology of cells.

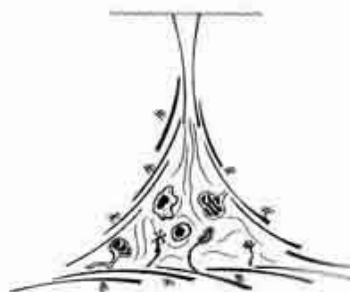
All cells have about similar morphology and physiology to provide exact functions. For example, “breathing”, “digestion”, “supporting homeostasis”, etc. So, all structures, which take part at the delivery of oxygen (electron of oxygen) from outside to mitochondria and synthesis of ATP are united by the term of “Lung”: trachea, bronchus, alveolus, alveolar cell membrane, haemoglobin of red blood cells, capillaries, cell mitochondria, cytochromes, ATP-synthetasa. Structures of cells’ nuclei, including DNA molecules, are united by the term “Kidney”. Golgi complex of the cells and function of accumulation of trace elements, vitamins and various biological active substances are related to the “Liver”, etc.

2. Structure and electrical characteristics of the skin

The researches, which have been carried out in various countries have shown that conductivity of the skin varies on a functional condition of internal organs. Changes of the conductivity can be observed on any standard sites of the skin or on the sites of skin known from traditional Oriental medicine as Acupoints and reflexogenic zones [R.Voll, 1960; J.Niboet, 1955; Y.Nakatany *et al.*, 1977, *etc.*].

The skin of the person and animals consists from epidermis and derma. Epidermis is submitted by the stratified flat keratinized epithelium in which constantly there is cell updating and specific cell differentiation – keratinization (fig. 1).

Exit / Entrance of Acupoint



– Skin surface –

– “Channel” of Acupoint –

– “Active zone” of Acupoint –

– Regular Channel –

Exit / Entrance of Acupoint

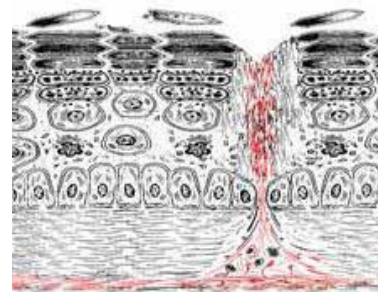


Figure 1. The schema of the skin and acupoint

Resistance of the cellular membrane is great enough (especially in keratose cells) and many times over exceeds conductivity in the micro-gaps available between cells. Therefore, it is possible to assume, that the basic contribution to conductivity of the skin (outside of Acupoints) is brought with conductivity of intercellular gaps. One may suppose that width of intercellular gaps reflects a condition of defensive energy or Wei Qi. That is why applying Kirlian’s photography to visualize diffuse conductivity they claim that it is a visualization of “AURA”.

Local conductivity at the site of Acupoints has another morphologic base. Acupoint looks like gap between muscles and tendons. It is formed by soft connective tissue with a large number of nervous receptors, free nervous endings, a developed vascular system, cell elements containing biologically active substances, and a lot of “gap” connections between cells [N.Verzhbitskaya, 1980; V.Mashansky, 1983]. The active part of the point is connected with the skin surface by means of acupoint channel, which penetrate epidermis and derma and has lower resistance than surrounding skin (fig. 1).

3. Visualization of Acupoints by AcuVision device

It is supposed, that high level of nutrient energy (*Ying Qi*) in Regular channel is accompanied by increase of its conductivity. Activity of the channel and deep part of the point is reflected on the conductivity of the point entrance/exit on the skin surface.

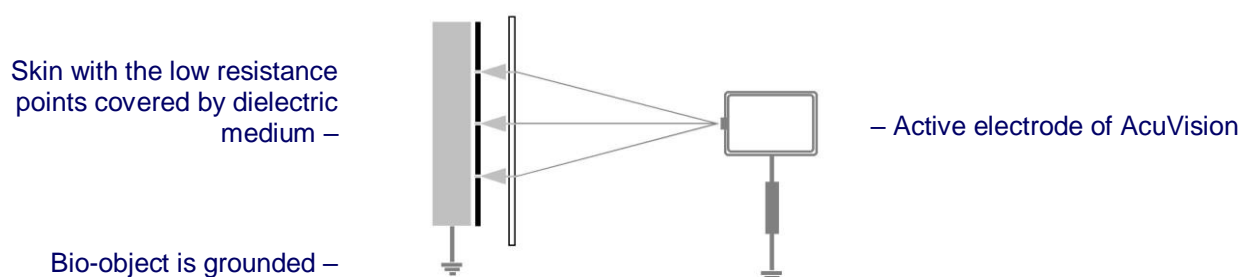


Figure 2. Physical base of low resistance point visualization

An examined patient should be grounded before the session of low resistance points visualization. The investigated skin area must be covered with a thin dielectric medium, for example a piece of polythene, cotton fabric or paper. A high voltage corona discharge between the patient's body and active electrode are formed by "AcuVision" device (fig. 2).

Disruption of electrical field has the highest value above low electric resistance points of the skin. At these areas stimulated luminescence is observed on the dielectric medium (fig. 3). After visualization of low resistance points a doctor must estimate the received results correctly.

For a tentative estimation they analyze location, brightness and duration of the luminescence (fig. 3). These criteria are based on the experimental data showing, that the size of conducting site of the skin in Acupoints area depends on a Qi level: at a phenomenon of Excess the size of conducting window is increased, and at lack of energy (Deficiency) it decreases [A.Podshibiakin, 1960; Ionescu-Tirgoviste, 1984].



Figure 3. Examples of low resistance points visualization.*

* - In the report published at the abstract book, pictures were not included